

REMARKS

This is in response to the Official Action of August 12, 2004. Entry of this Amendment and reconsideration of the rejection is respectfully requested.

First, in response to paragraph 1 of the Official Action, Applicant had typographical patent number errors in the introductory portion of the specification, and the "D" in front of those patent numbers are in error. These patents are utility patents listed on the Information Disclosure Statement Form 1449, and have been considered by the Examiner. The specification is amended to correct the errors.

However, it is also requested of the Examiner to clarify why the line was drawn through the reference "AA", namely, Patent No. 14,847 to J.H. Redfield et al. on the returned copy of the form 1449. 14,847 is a U.S. patent number, and for information purposes, a copy of the patent is enclosed.

The returned copy of PTO Form 1449 indicated patent No. 14,847 had been initialed by the Examiner, so it is assumed that the Examiner reviewed that patent. If there is some misunderstanding about the reference, clarification is respectfully requested.

Replacement drawings are enclosed to correct the errors pointed out in paragraphs 2 and 3 of the Official Action. The reference numeral 25 that was initially put on Figure 2 has been removed, in that numeral 25 is referring to a part that is on the underside of the sickle knife section and it appears in Figure 3.

Amendment has been made to line 6 of page 6, but it was not immediately apparent why it was considered incomplete. It was not in proper Syntax, however, and that has been corrected.

Reconsideration of the rejection of the claims is respectfully requested.

Claim 1 has been amended to clearly differentiate over the Lawson patent, which does show a conventional sickle knife

section that has a triangular shape with straight side edges leaving from the tip to the base. In order to more clearly define the invention, the Applicant has clarified that the cutting lines are concave with respect to a straight line that extends between the ends of the respective cutting line. The concavity is clearly shown and described in the specification and drawings.

This is quite different from the ordinary sickle section shown in the Lawson Patent, which has the straight line edges.

The design of the present invention increases the cut capacity, or in other words, the gathering capacity of the sickle as it reciprocates between the sickle guards. It is a reciprocating sickle, as specified in claim 1, and thus each concave cutting edge provides a larger opening space as it reciprocates and moves relative to the sickle guards, which include the cutting plates against which the sickle runs for severing the crop material stalks.

The lack of teaching in Lawson of this concave structure is therefore believed to define a substantial step in the art, and the claim is believed allowable.

In regard to claims 4 and 6-8 which were rejected under 35 U.S.C. § 103(a), over a combination of Lawson and the Ream patent, the reciprocating sickle which is also now defined in claim 6, differentiates clearly from the teaching of the Ream patent, which shows a rotating member with skewed rotating cutting disc action against fixed ledger plate edges. The fixed edges are configured to mate with the moving edges of the rotating cutting device. The shape of the cutting plate would not suggest concave edges on a reciprocating knife. The ledger plate edge that must be not only concave, but must also be annular or part cylindrical to match the path of the skewed rotating disc. It is not a planar unit as defined in the claims.

The teaching in Ream is not related to a reciprocating sickle that would have knife sections with a concave edge, but rather, the edge on the fixed ledger plate in the Ream patent provides a mating for the rotating disks 80 in order to provide a cutting action.

The rotating member 80 is the active member in the Ream device, and there is no reciprocating sickle knife in the manner set forth in the present claims.

Thus, it is believed that the independent claims 1 and 6 are clearly allowable over Lawson by itself, or a combination of Ream and Lawson.

Claim 3 was rejected on a combination of the Lawson patent in view of Yang et al.

Again, claim 3, while it specifies a particular distance for the base section is believed allowable with claim 1 which is shown to be non-obvious over Lawson, and Ream or certainly novel over the Lawson patent by itself.

Claim 9 follows claim 6, and includes a reciprocating sickle knife section which has a knife section plane extending between the side edges, and the smoothly curved concave cutting edge that moves outwardly continually from adjacent the tip to the respective base side edge, with respect to a central bisecting plane perpendicular to the knife section panel.

Claims 10 and 11 are believed allowable with claim 9, and claim 12 indicates that the knife section is specifically symmetrical with respect to the bisecting central plane.

The double edge knife section of claim 13 includes the sharpened edges of the knife section that taper from the cutting edge line upwardly toward the central plane, to define the sharpened edge, and while sharpened edges are common in sickle sections, this is a particular arrangement for a reciprocating knife that has the concave cutting lines to increase the capacity to cut stalks due to the layer opening achieved.

It must be noted that the Lawson patent does have just have a straight line edge along the cutting edges, and the edges are not concave as specified in all of the independent claims at the present time.

Therefore, it is believed that the claims are allowable over these references, and action to that effect is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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